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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,021	03/19/2002	Tadashi Ishibashi	9793822-0158	6238

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EXAMINER

THOMPSON, CAMIE S

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/009,021	Applicant(s) ISHIBASHI ET AL.	
	Examiner Camie S. Thompson	Art Unit 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed June 10, 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,9-15,17,18,21-26,29-35,37,38,41-46,49-53 and 56-61 is/are pending in the application.
- 4a) Of the above claim(s) 1-6,21-26 and 41-46 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29-35, 37-38, 49-53 and 56-61 is/are allowed.
- 6) ☒ Claim(s) 9-15,17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

HL

DETAILED ACTION

1. Applicant's amendment and accompanying remarks filed June 10, 2005.
2. Examiner acknowledges amended claims 9, 15, 17-18, 29, 35, 37-38, 49, 58 and 61.
3. Examiner acknowledges cancelled claims 16, 36 and 54-55.
4. Examiner acknowledges that claims 9-18, 29-35, 37-38, 49-53 and 56-61 are pending and under consideration. Applicant has amended claim 9 to exclude species 17-1.
5. The objection to claims 1-2, 15-16, 21-22, 35, 41, 49, 58 and 61 are withdrawn due to applicant's amended claims.
6. The rejection of claims 29-35, 37-38, 49-53 and 56-61 under 35 U.S.C. 112, second paragraph is withdrawn due to applicant's amended claims 29 and 49.
7. The rejection of claims 21 and 25 under 35 U.S.C. 112, second paragraph is withdrawn due to applicant's amended claims and exclusion of species 17-1.
8. The rejection of claims 1-2, 9 and 56-57 under 35 U.S.C. 102(b) as being anticipated by EP 0954205 is withdrawn due to applicant's amended claim 9 and argument.
9. The rejection of claims 1-6, 9-13, 21-27, 29-33, 35-36, 41-46, 49-53 and 59-60 under 35 U.S.C. 103(a) as being unpatentable over EP 0967834 is withdrawn due to applicant's amended claims and argument.
10. The rejection of claims 9, 14, 17-18, 29, 34, 37-38, 58 and 61 under 35 U.S.C. 103(a) as being unpatentable over EP 0967834 in view of Mori et al., U.S. Patent Number 5,281,489 is withdrawn due to applicant's amended claims and argument.

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11. The rejection of claims 1-6, 9-13 and 56 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over U.S. Patent Number 6,265,088 is withdrawn due to applicant's submission of the terminal disclaimer.

Claim Objections

12. Claims 29 and 49 are objected to because of the following informalities:

Claim 29: Delete the extraneous period following "(b)" on page 16 of the claims.

Claim 49: Delete the extraneous period following "(b)" on page 26 of the claims. Appropriate correction is required.

Claim Rejections - 35 USC § 112

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

14. Claims 9-15 and 17-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 9 is rendered indefinite because compound 15-1 has a strikethrough on page 4 of the claims. However, the structure for compound 15-1 on page 5 of the claims does not have strikethrough.

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

16. Claims 9-13 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Ichimura et al., U.S. Patent Number 6,525,212.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e).

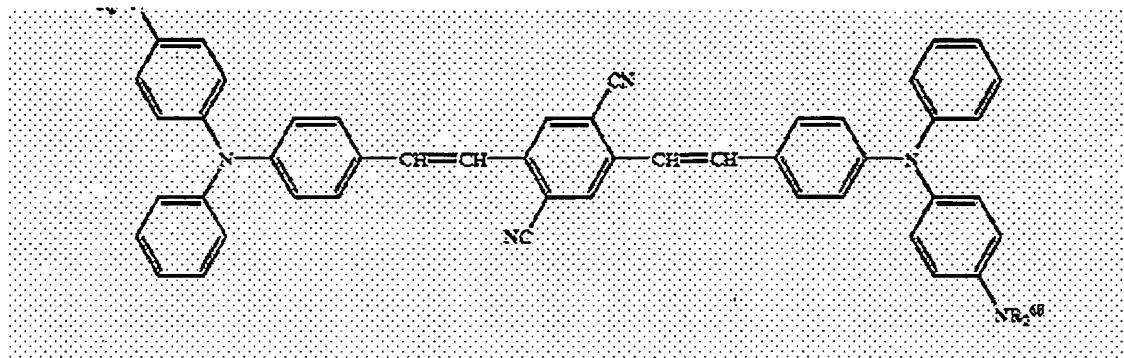
This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR

1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Ichimura discloses an organic electroluminescence device that comprises an organic layer having a luminescent region and is provided between an anode and a cathode. The organic layer

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comprises at least one distyryl compound such as

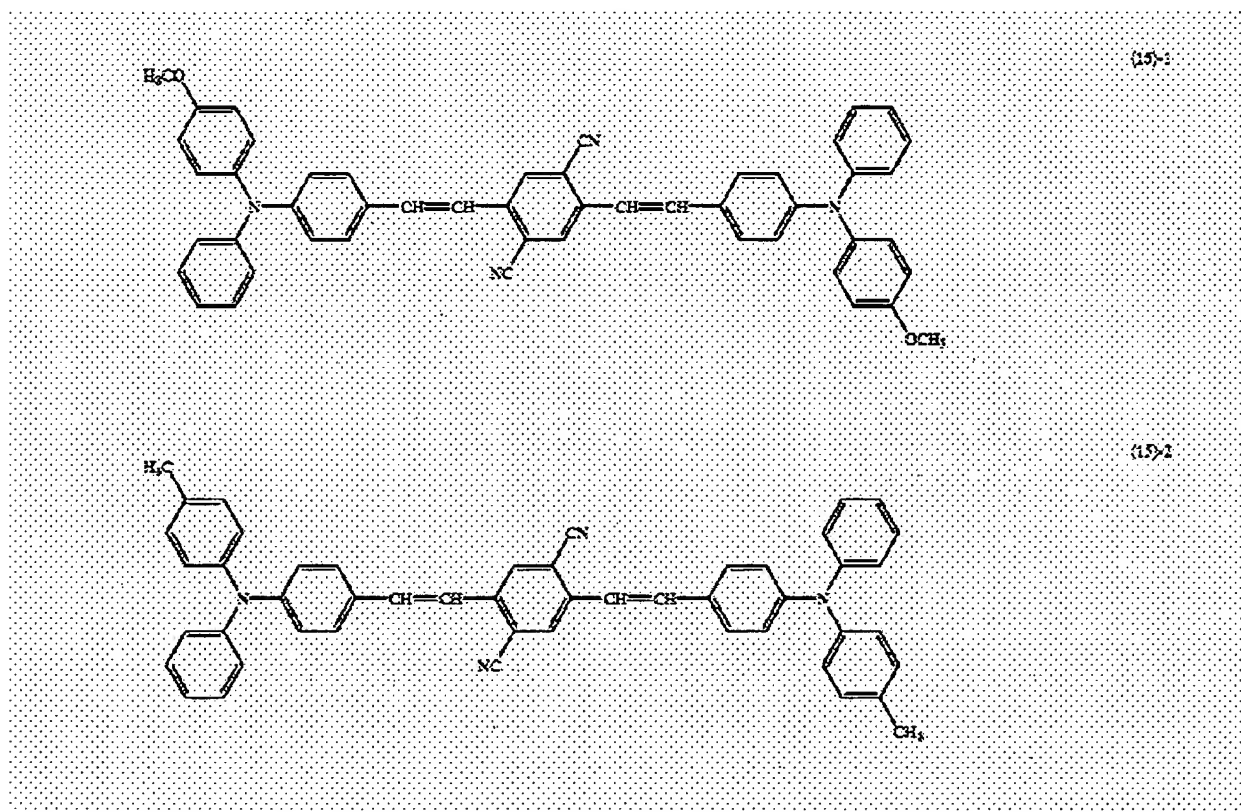


wherein R⁶⁸ is a phenyl group (which can include a substituent such as methyl) (see column 11, compound 14). Compound 14 of the reference reads on compound 15-10 of the instant claims. Additionally, the reference discloses that the organic layer comprises an electron transport layer, a hole transport layer and a luminescent layer (see 76, lines 35-59). Column 74, lines 61-68 of the reference discloses that the distyryl compounds have both electron transportability and hole transportability and can be used in the luminescent layer, electron transport layer or hole transport layer as per the instant claims. Additionally, it is disclosed in the reference in column 74 that the electron transport, hole transport and luminescent layers can comprise a mixture of a distyryl compound and a hole or electron transport material such as an aromatic amine (α -NPD) or a pyrazoline. Figures 45-47 of the reference disclose that the device is a multilayer structure as per the instant claims. The reference discloses a hole blocking layer or an exciton-generating layer in order to improve the luminescent efficiency as per the instant claims (see column 77, lines 1-9).

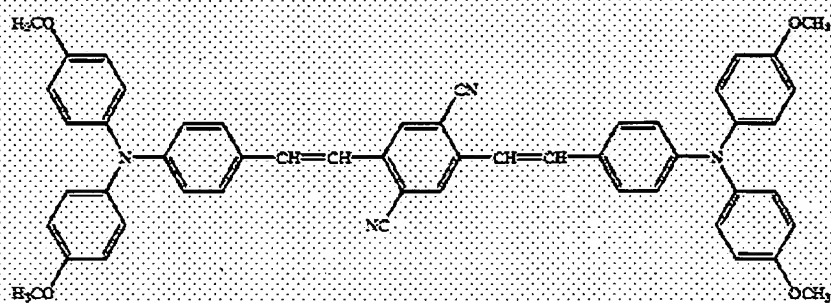
17. Claims 29-35, 37-38, 49-53 and 56-61 are allowed. The prior art does not provide for an electroluminescent element comprising:

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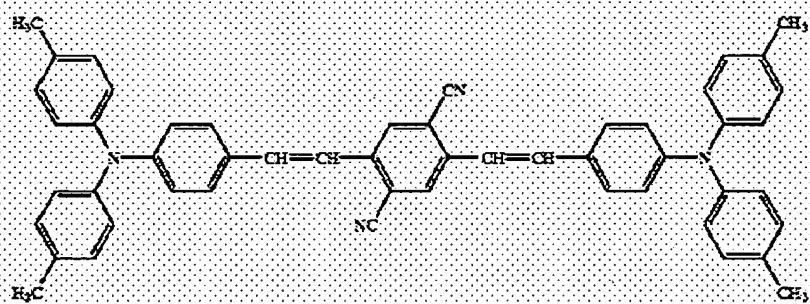
- (a) a cathode and an anode,
- (b) an organic layer disposed between the anode and the cathode, the organic layer comprising a luminescent organic material comprising at least one distyryl compound selected from the groups consisting of 15-1 to 15-12, 16-1 to 16-12, 17-1 to 17-6 18-1 to 18-6



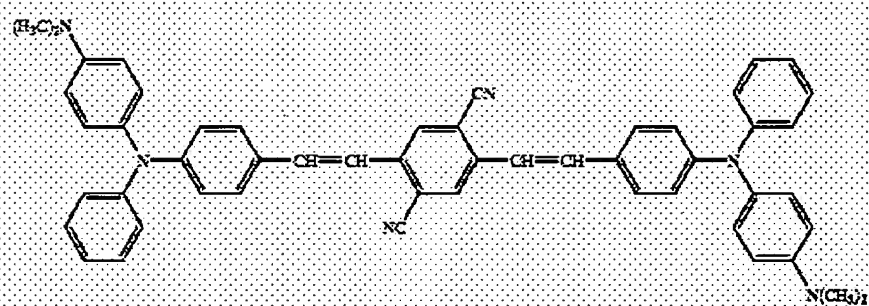
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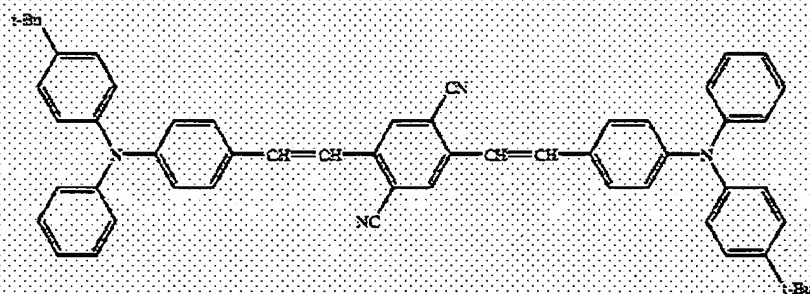
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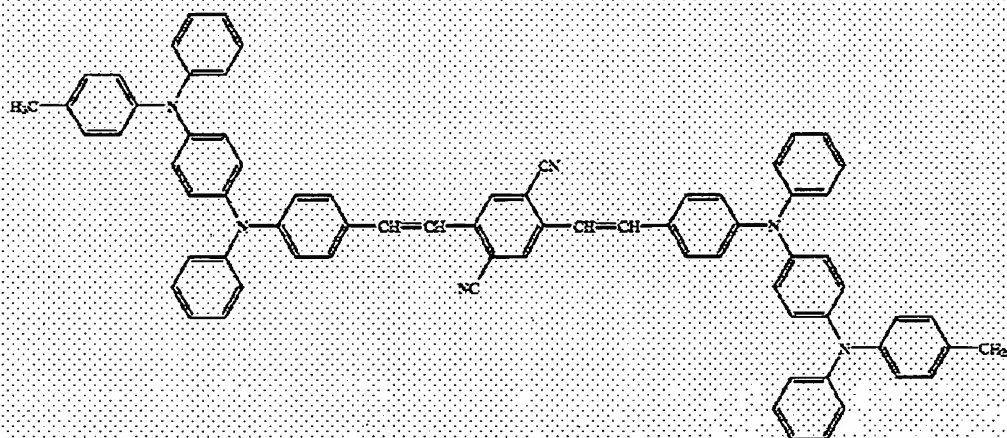
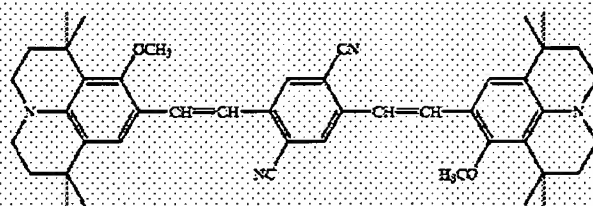
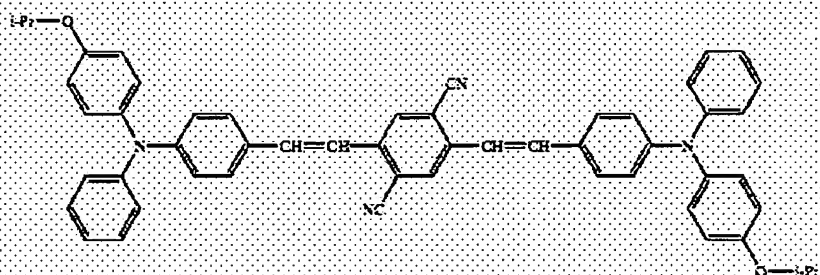
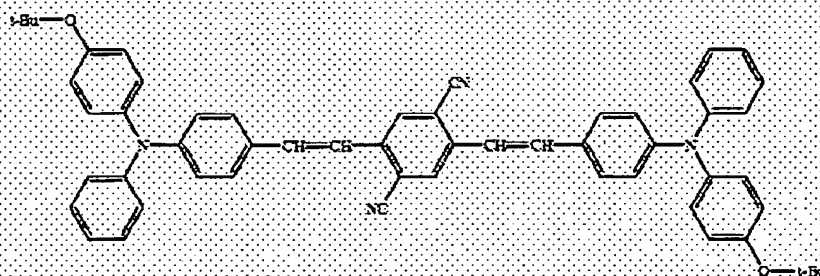


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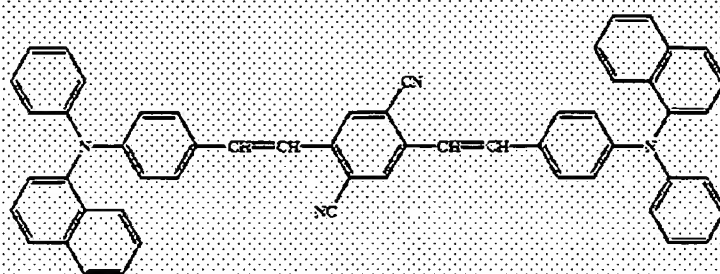


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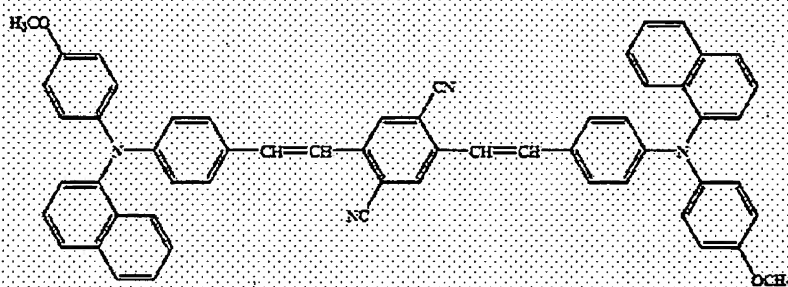
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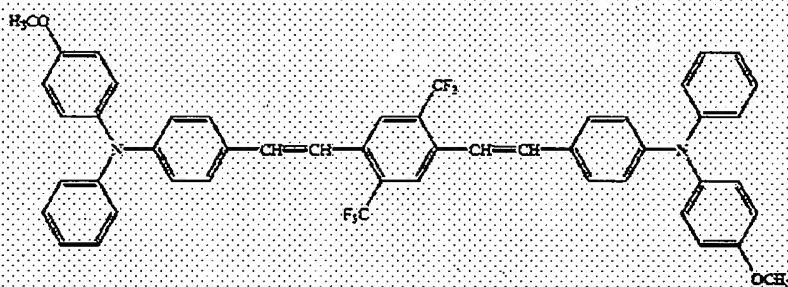
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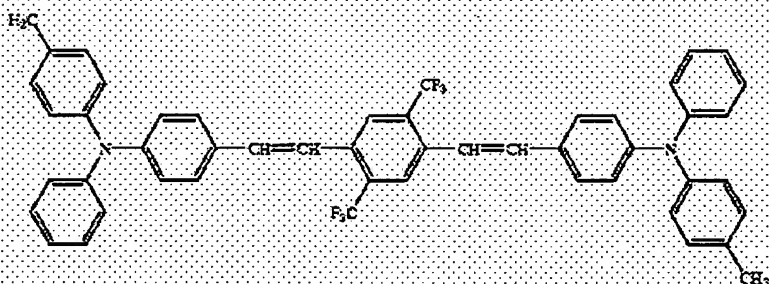
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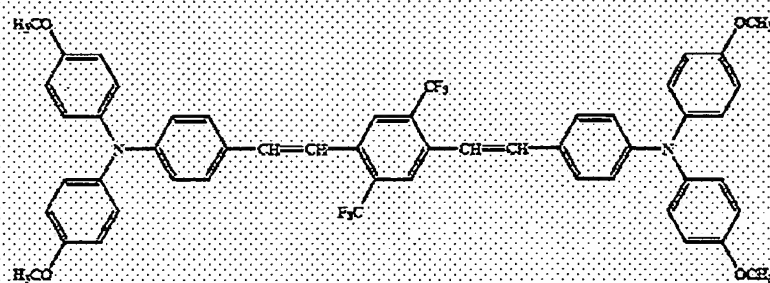


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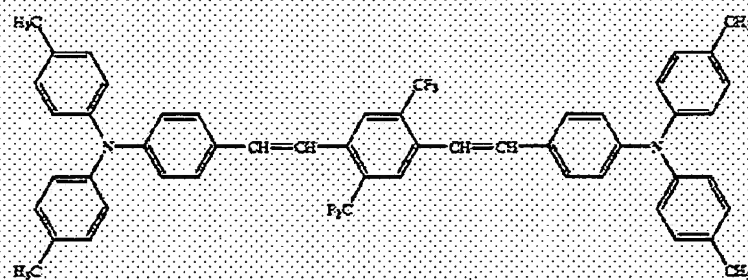


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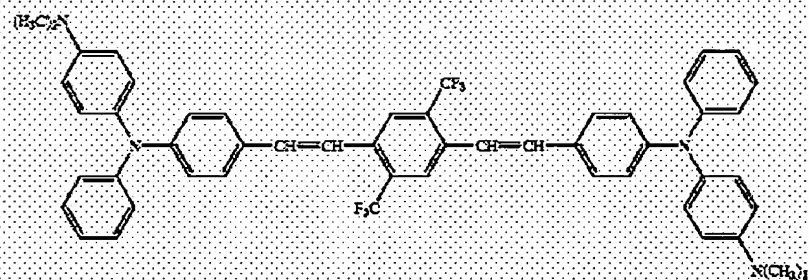
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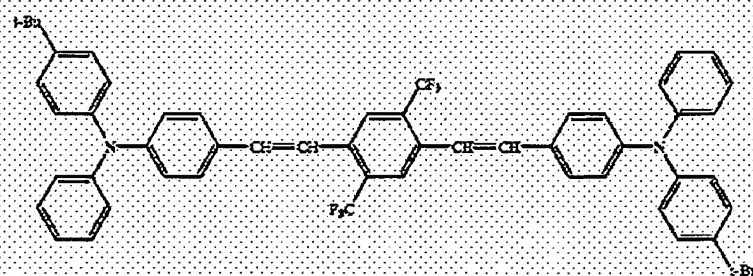
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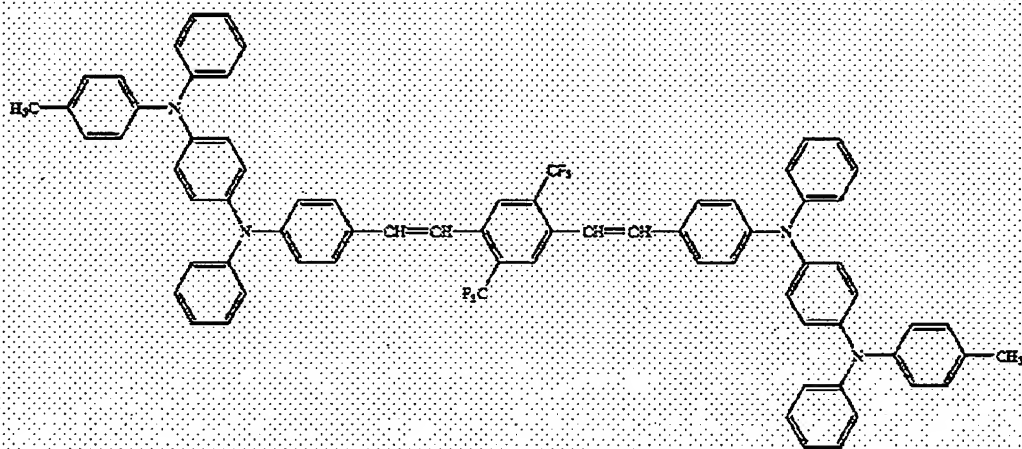
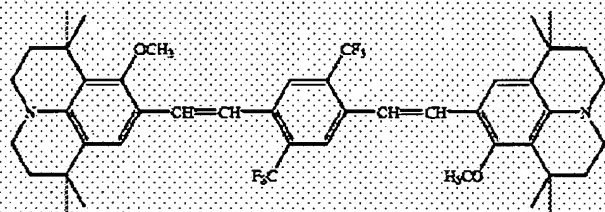
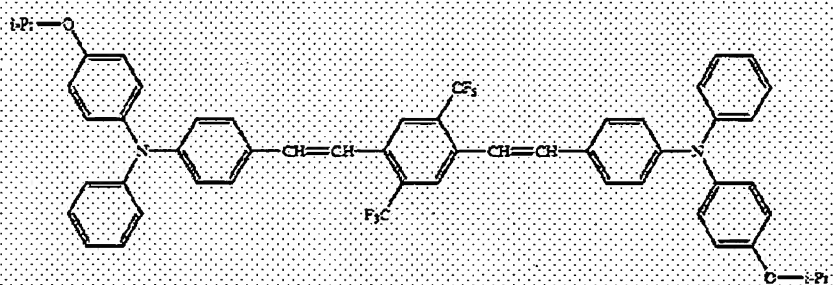
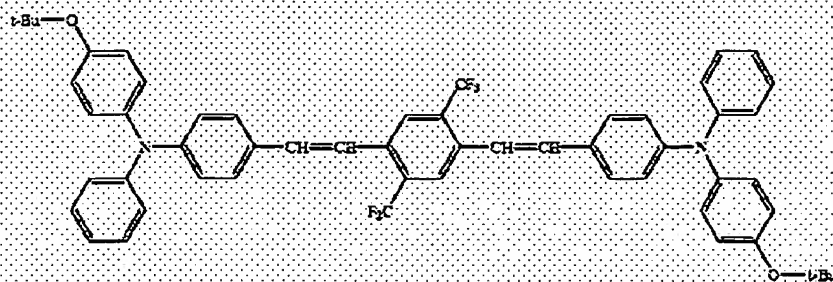


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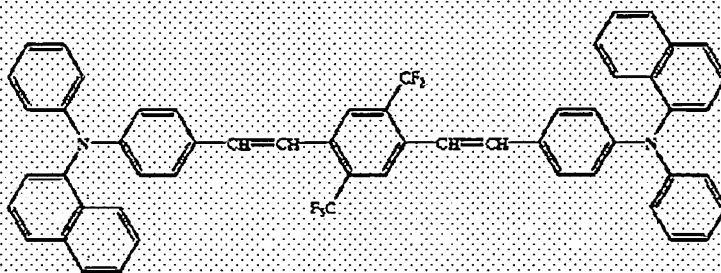
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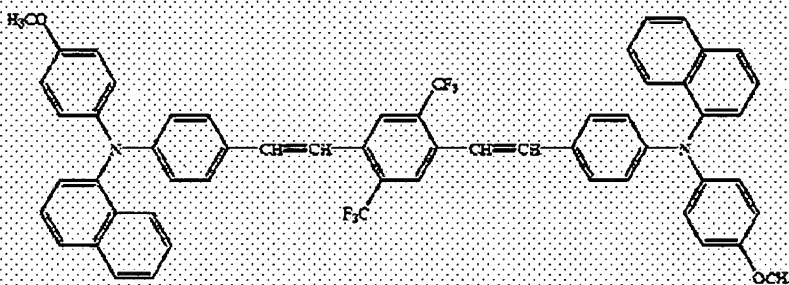


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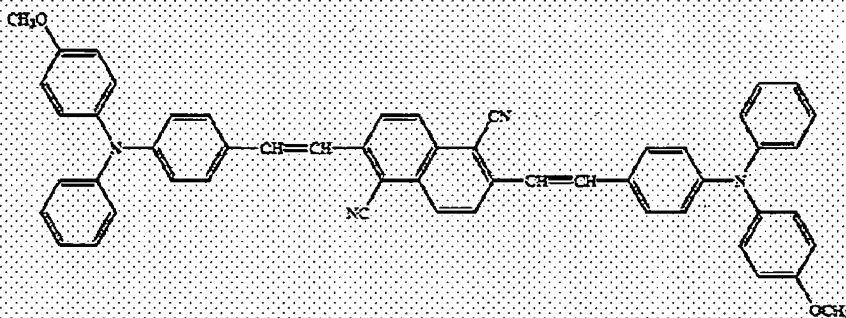
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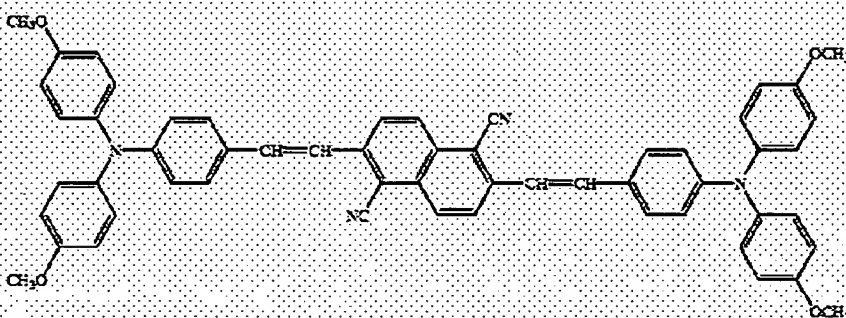
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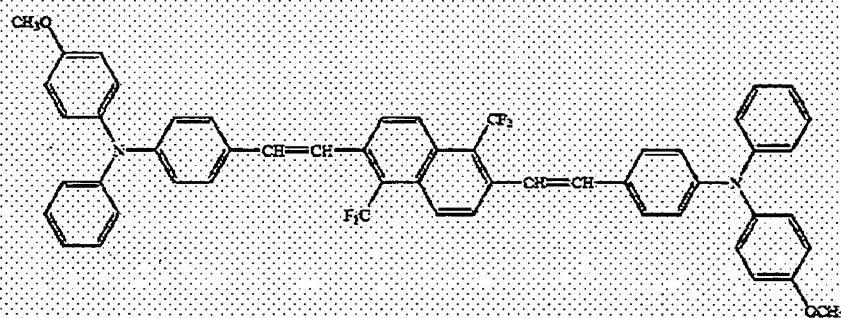
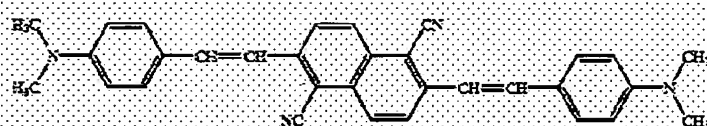
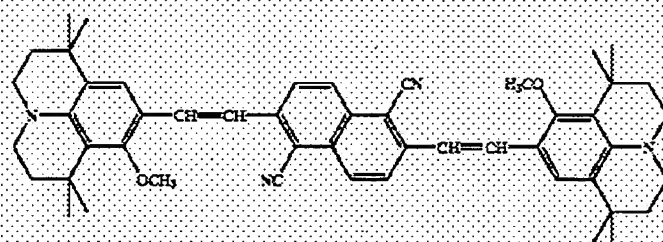
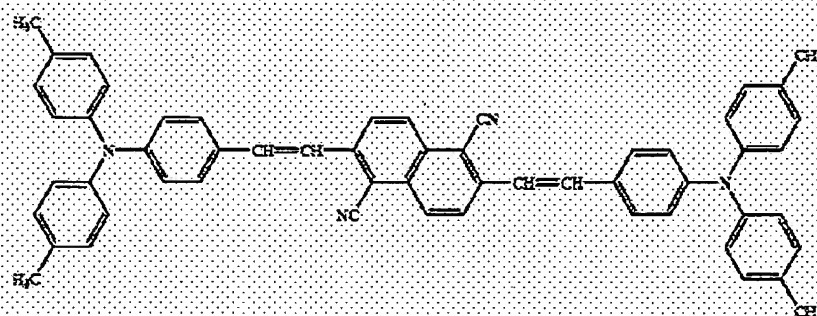
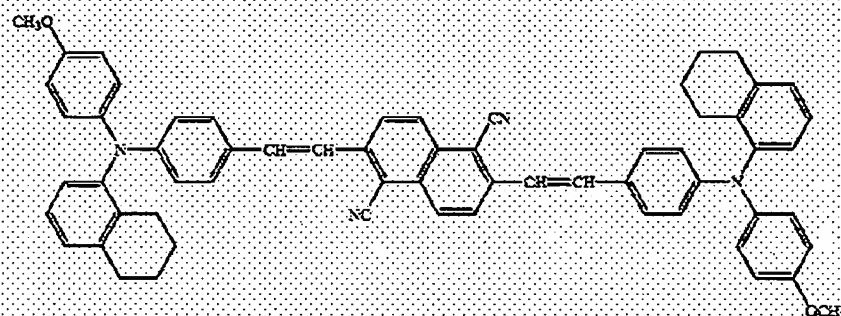
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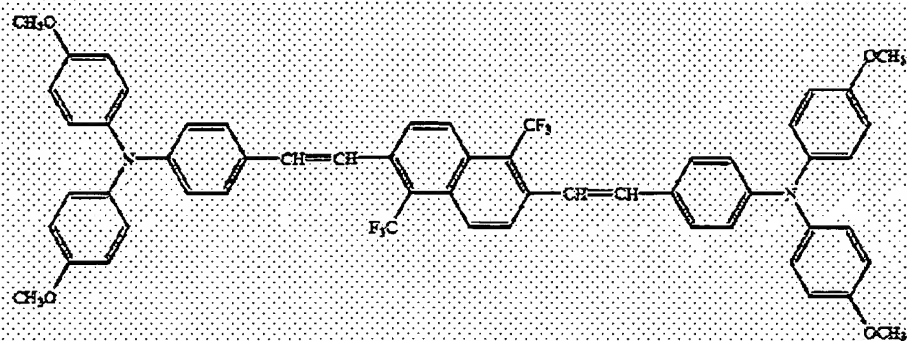
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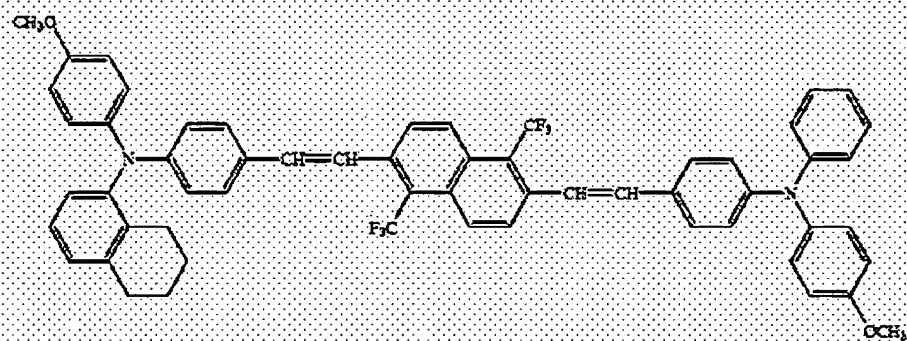
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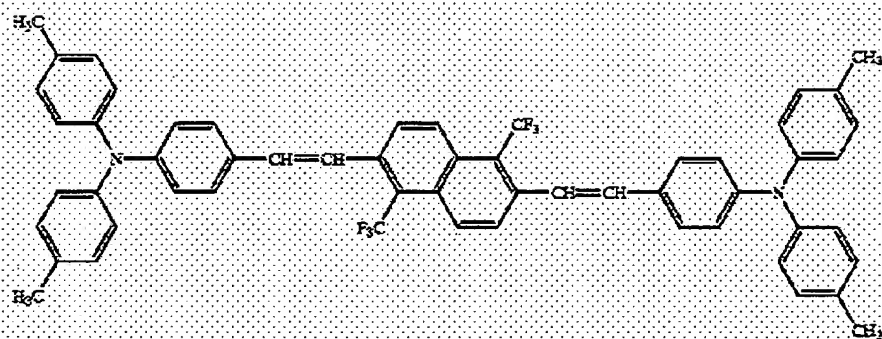
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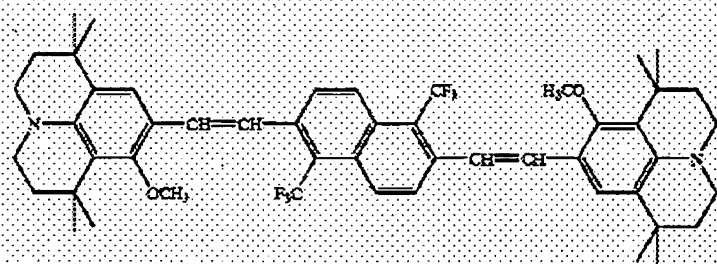
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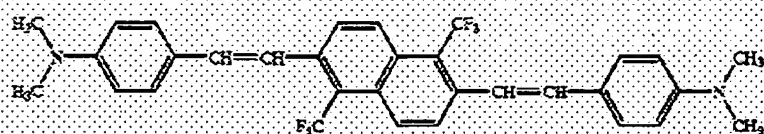
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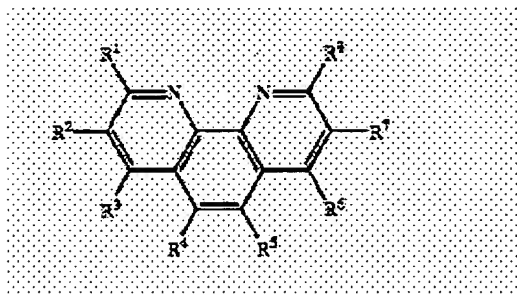
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(c) a hole blocking layer disposed between the cathode and organic layer (b) wherein said hole blocking layer comprises one or more compounds of formula A



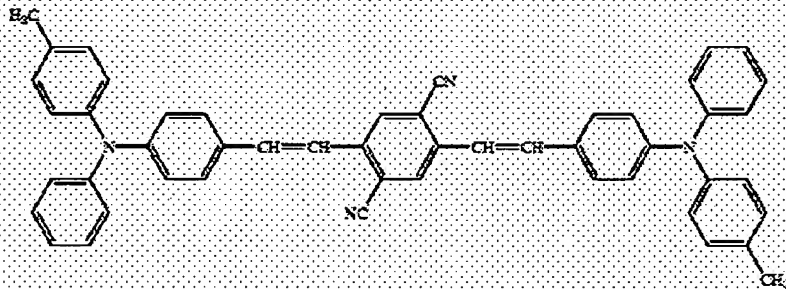
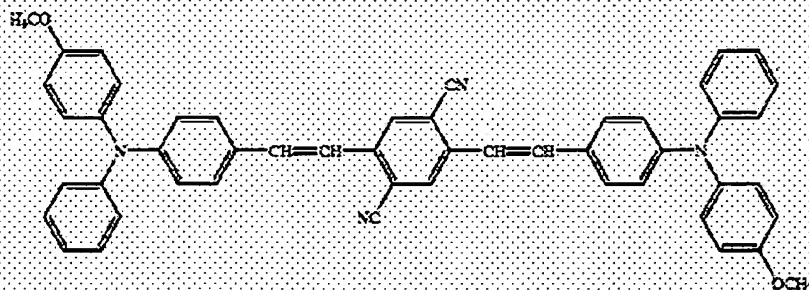
wherein R^1 to R^8 are independently selected from hydrogen, alkyl, aryl, amino, halogen, cyano and hydroxyl.

Additionally, the prior art does not provide for an electroluminescent element comprising:

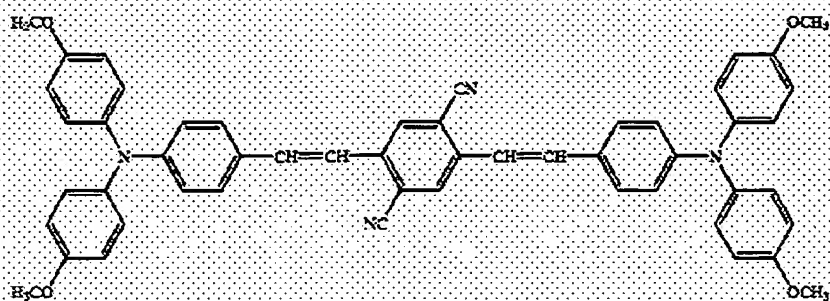
- (a) a cathode and an anode,
- (b) an organic layer disposed between the anode and the cathode, the organic layer comprising a luminescent organic material, the luminescent organic material comprising:

(i) at least one aminostyryl compound selected from the group consisting of 15-1 to 15-12, 16-1 to 16-12, 17-1 to 17-6 18-1 to 18-6

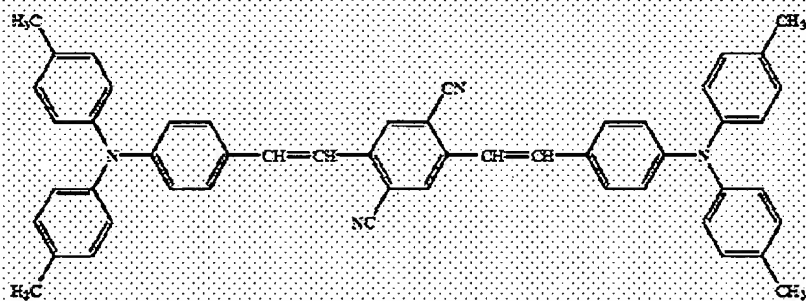
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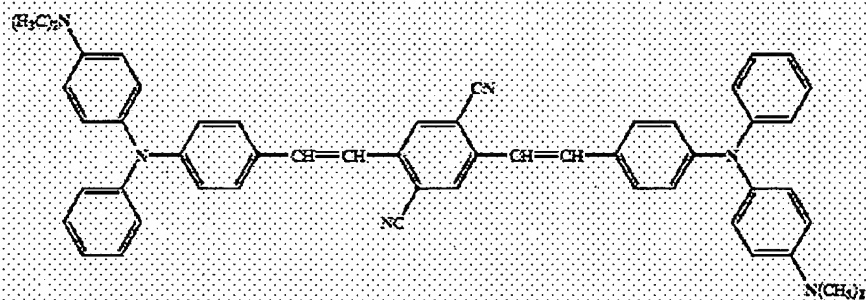
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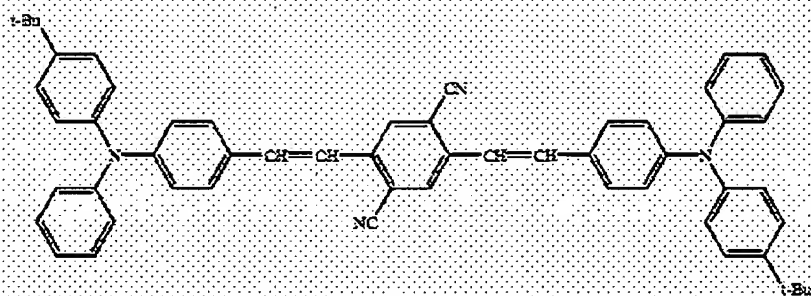
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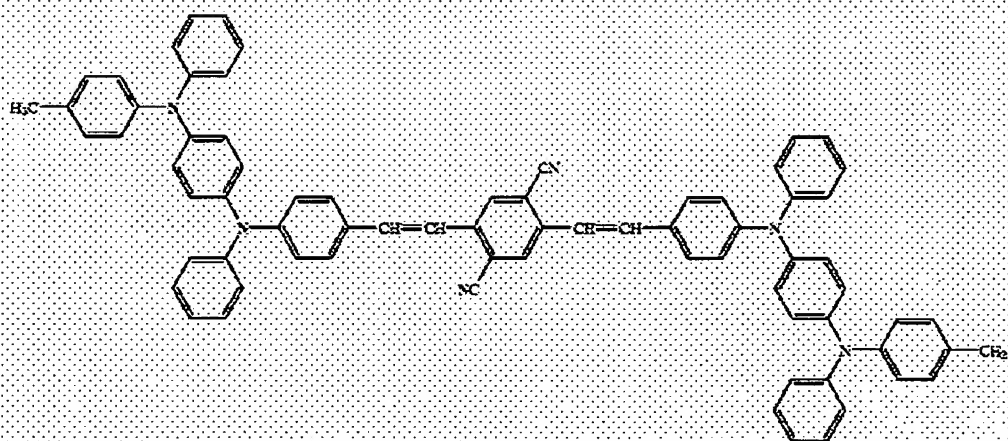
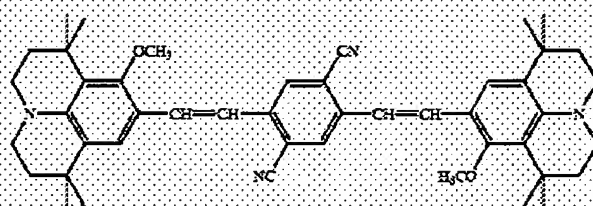
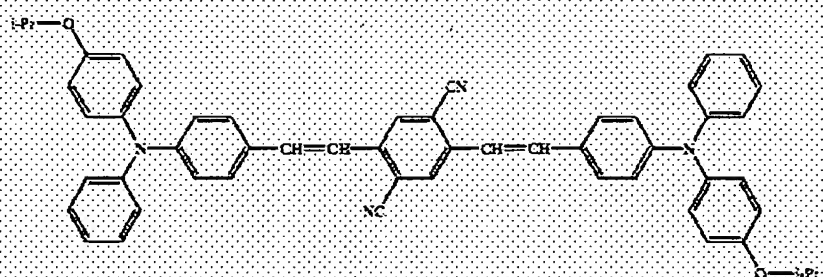
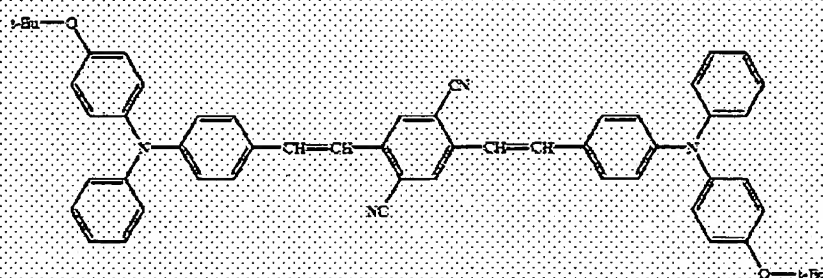


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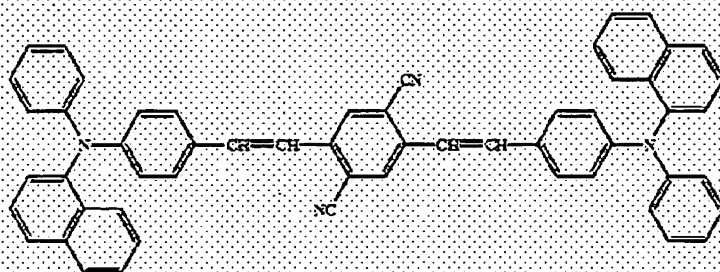
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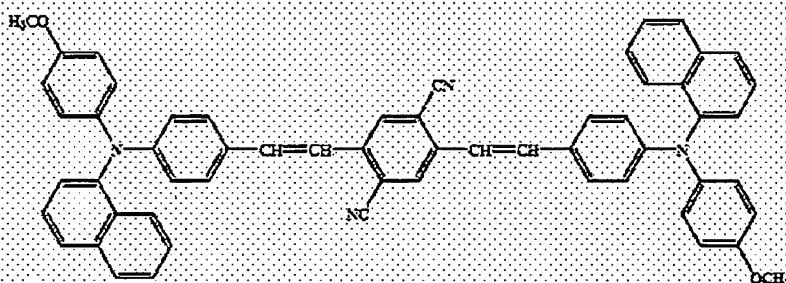


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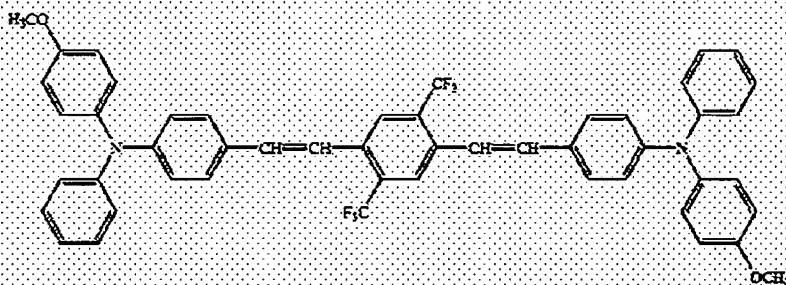
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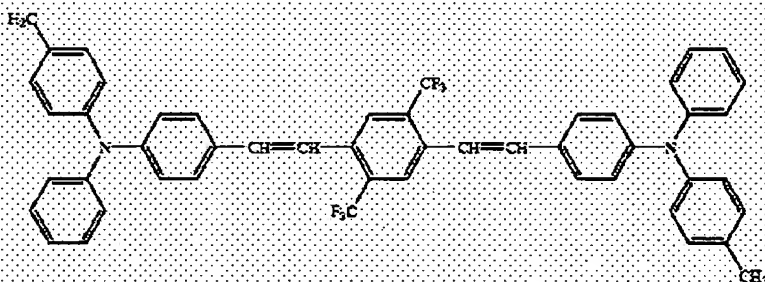
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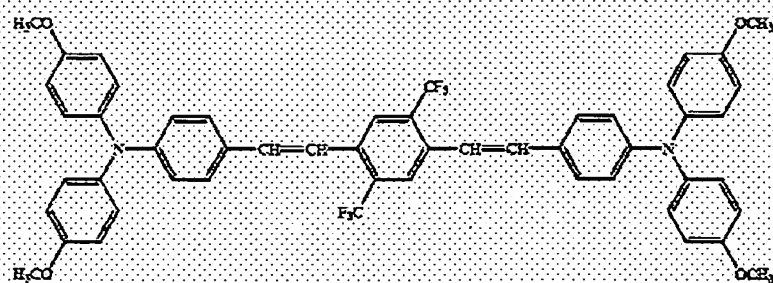
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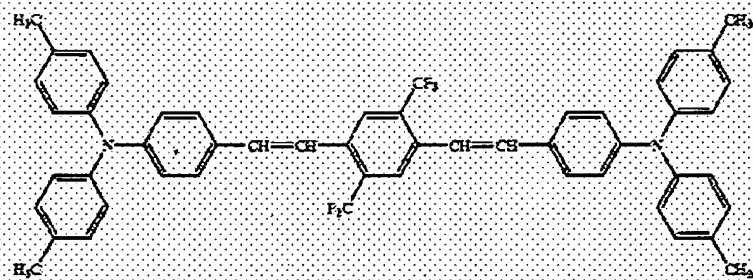
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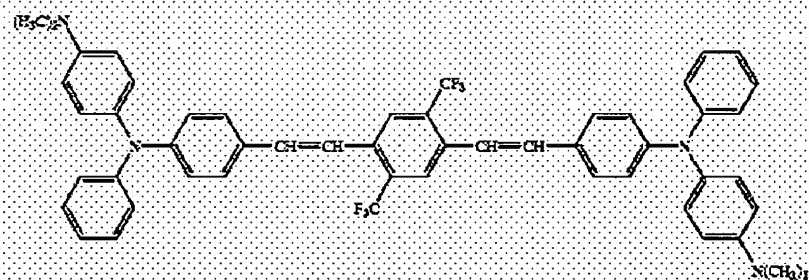
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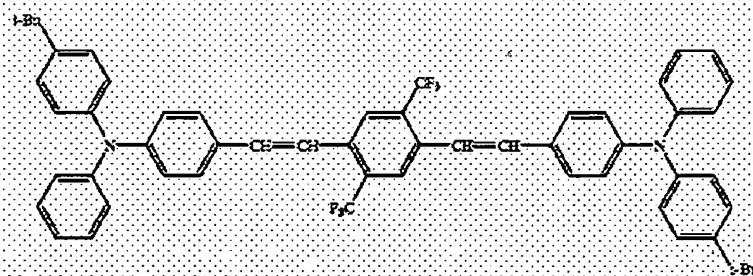
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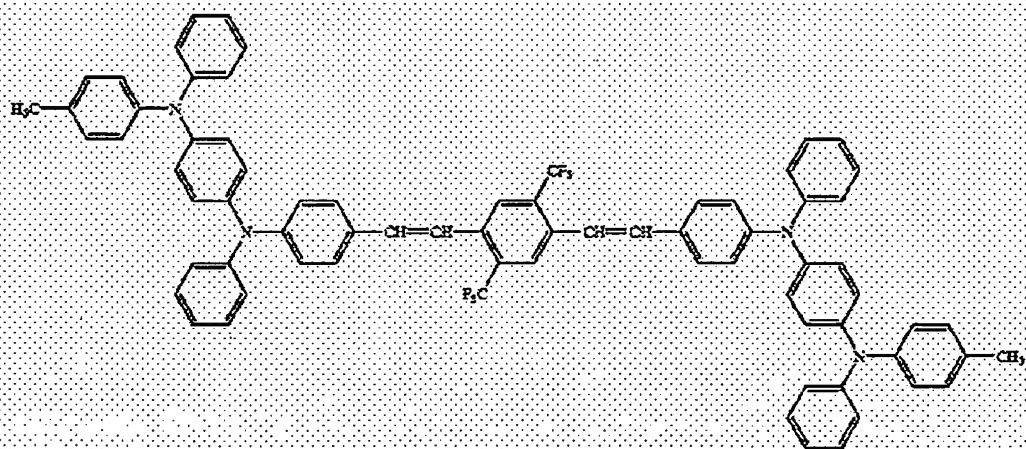
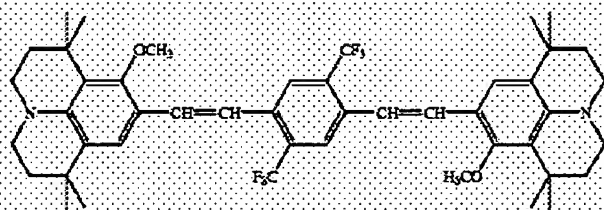
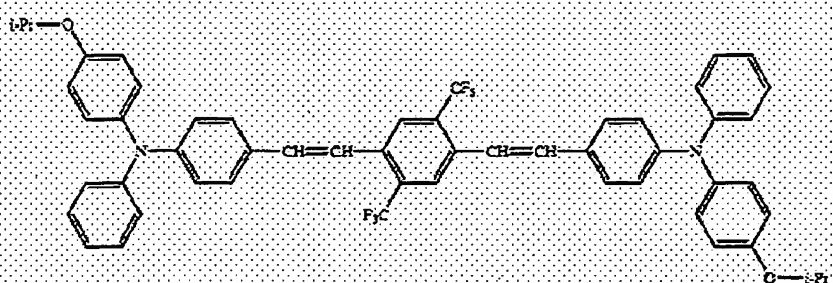
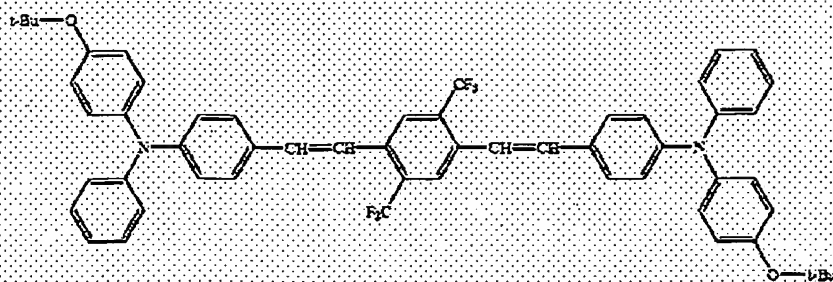


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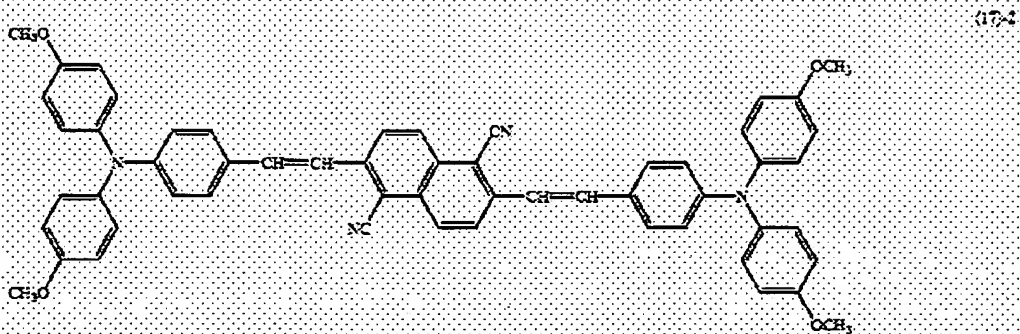
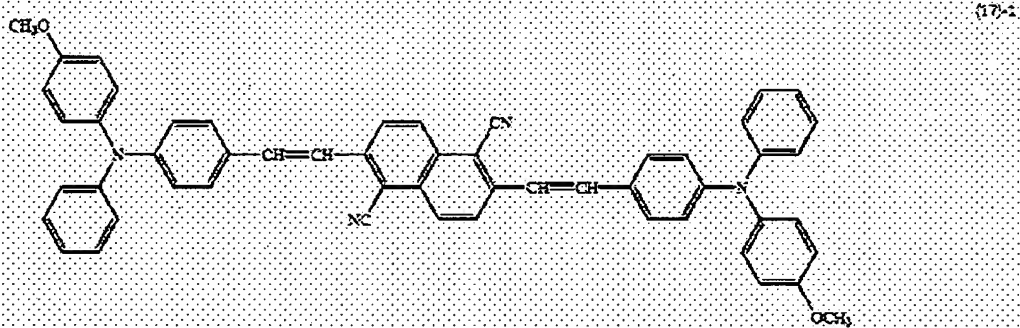
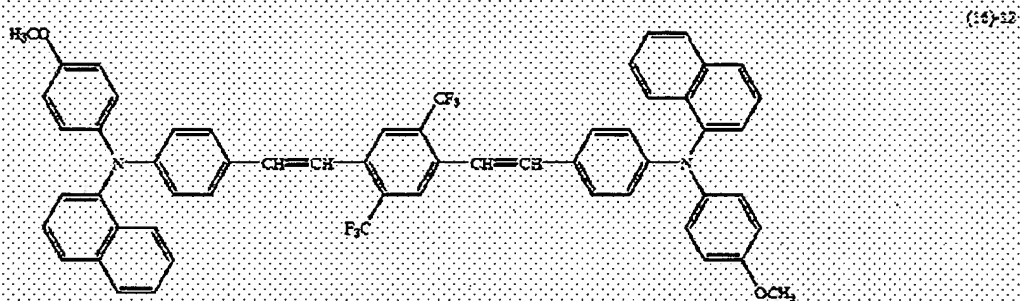
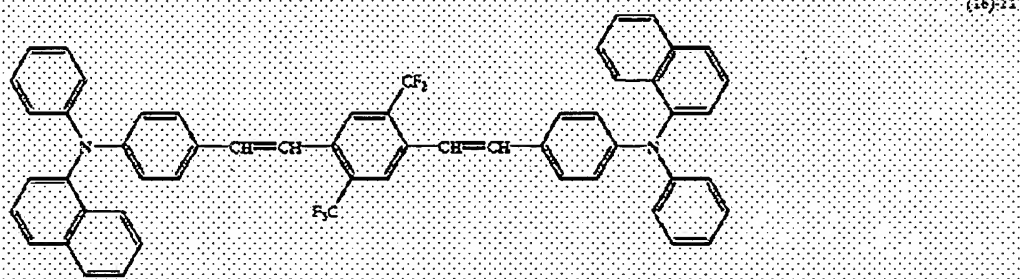


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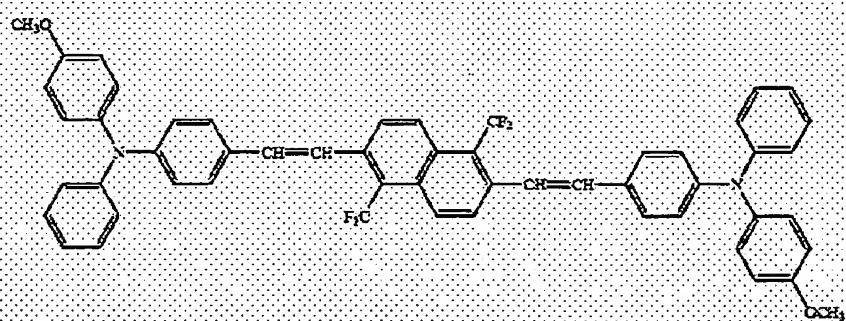
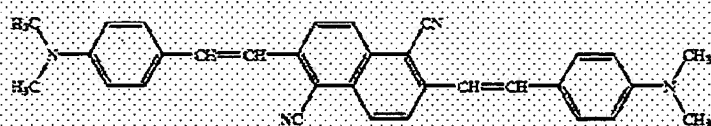
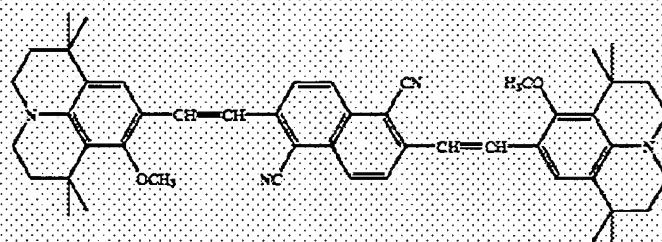
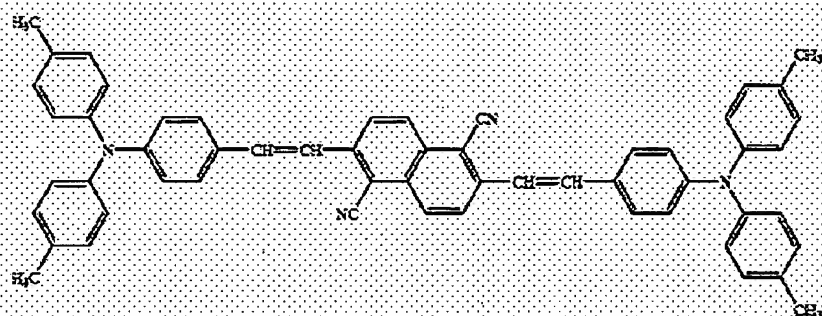
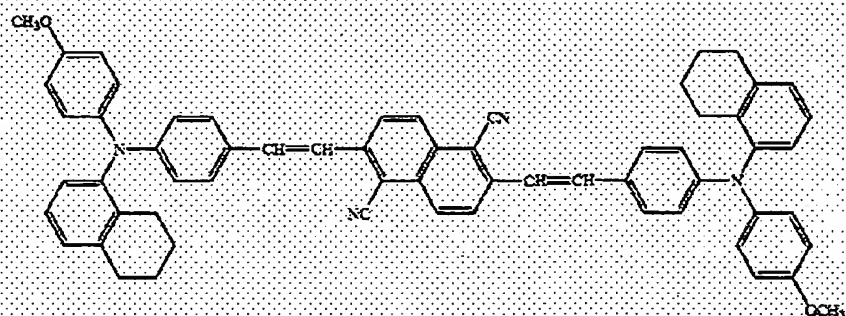
Art Unit: 1774



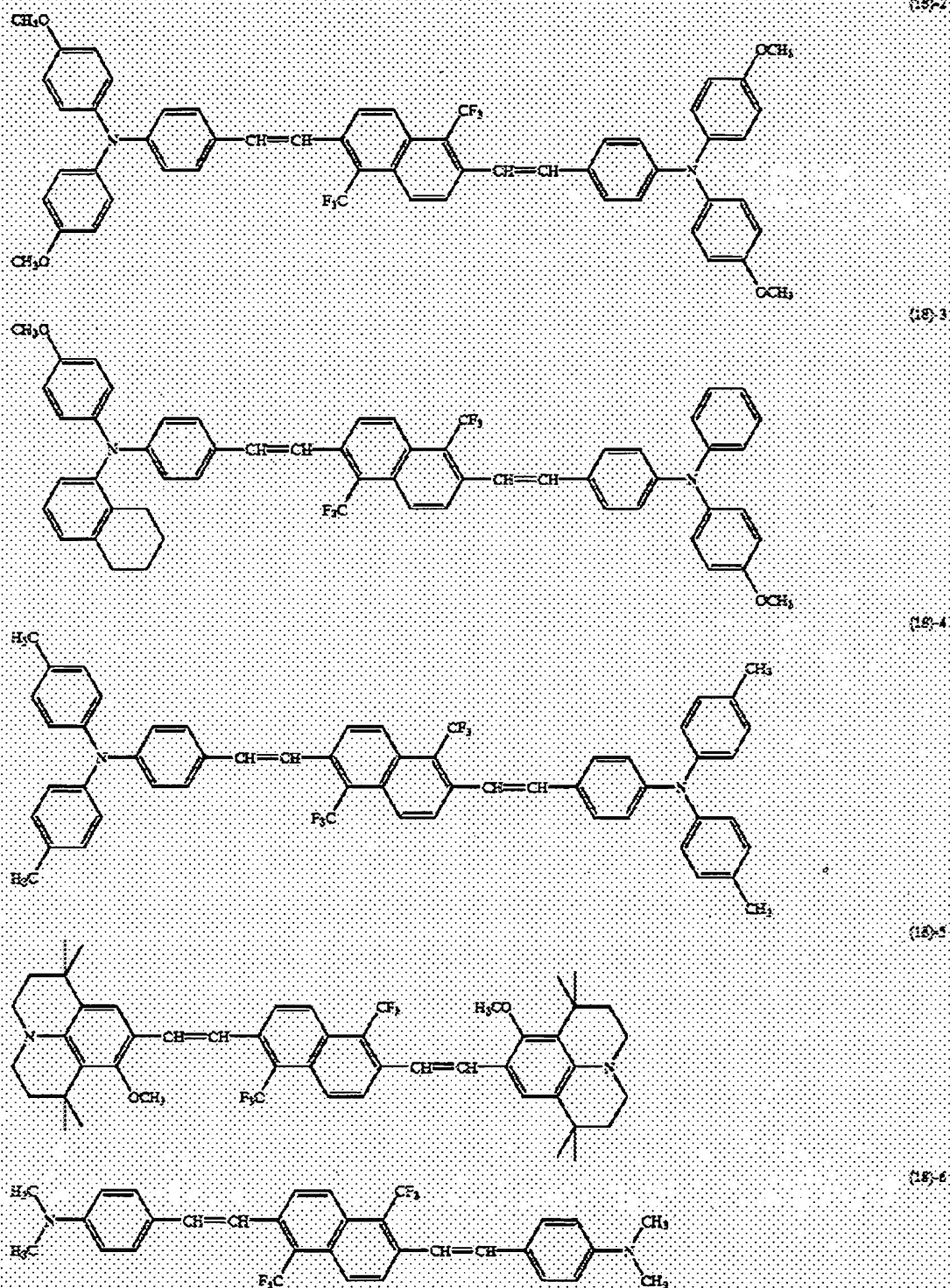
Art Unit: 1774



Art Unit: 1774



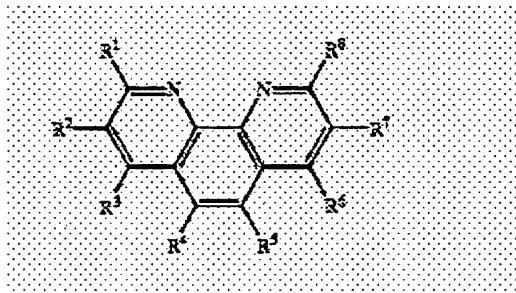
Art Unit: 1774



Art Unit: 1774

(ii) at least one compound selected from the group consisting of hole transport materials, electron transport material and dopants for red light emission

(c) a hole blocking layer disposed between the cathode and organic layer (b) wherein said hole blocking layer comprises one or more compounds of formula A

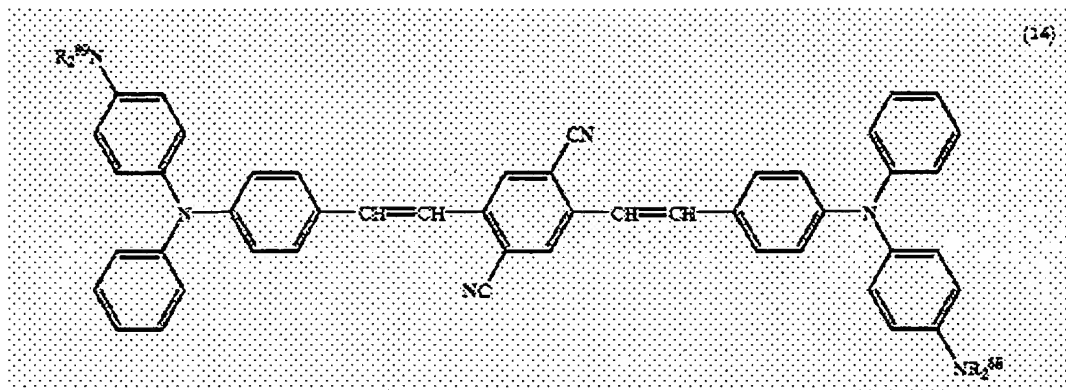


wherein R¹ to R⁸ are independently selected from hydrogen, alkyl, aryl, amino, halogen, cyano and hydroxyl.

Response to Arguments

18. Applicant's arguments filed June 10, 2005 have been fully considered but they are not persuasive. Applicant has amended claim 9 to recite aminostyryl compounds selected from 15-9, 15-10, 16-1 to 16-12, 17-2 to 17-6 and 18-1 to 18-6. Compound 14 of the Ichimura reference

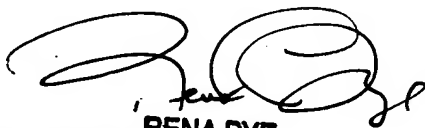
Art Unit: 1774



reads on compound 15-10 when R^{68} is a phenyl group. A phenyl group can have a substituent, which can include methyl. The rejection is maintained.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L Dye, can be reached at (571) 272-3186. The fax phone number for the Group is 571-273-8300.

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SUPERVISORY PATENT EXAMINER
A.U. 1774 8/18/05